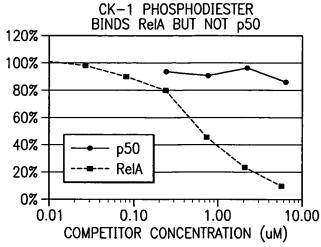


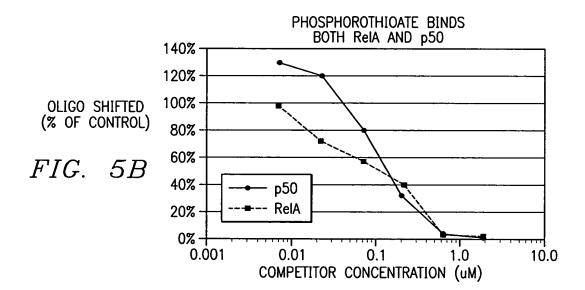






FIG. 5A





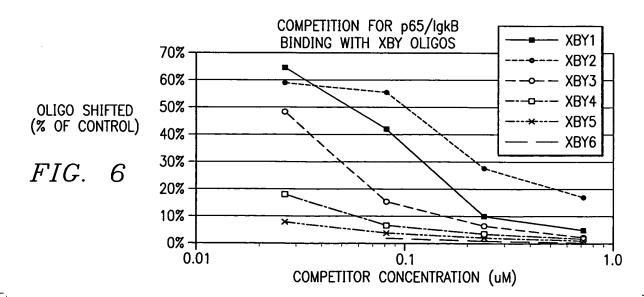
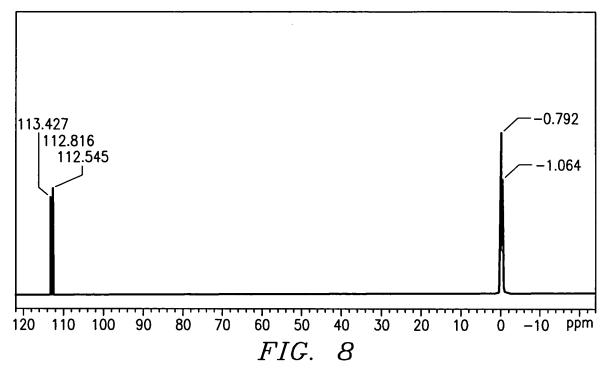


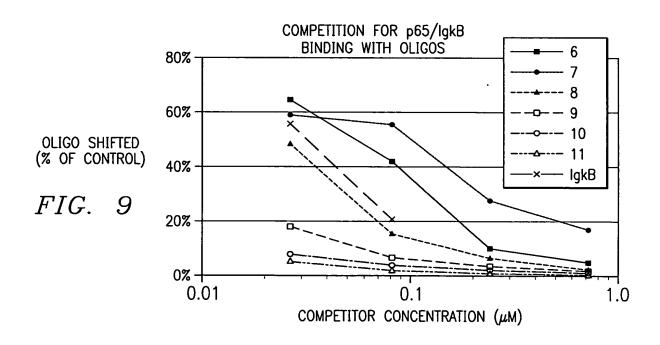


FIG. 7A									
8)	5'CCC 3'GGG	A <sub>S</sub> CA <sub>S</sub> TGT	TGN A <sub>S</sub> CN	A <sub>S</sub> CA <sub>S</sub> TGT	CNC GNG	CGC GCG	CCC GGG	C3'	(SEQ ID 27)
7)	5'CCC 3'GGG	A <sub>S</sub> CA <sub>S</sub> TGT	TGT A <sub>S</sub> CA <sub>S</sub>	A <sub>S</sub> CA <sub>S</sub> TGT	CGC GCG	CGC GCG	CCC	CGC CG	•
6)	5'GGT 3'CCA <sub>S</sub>	A <sub>S</sub> TA <sub>S</sub> TA <sub>S</sub> T	CTC GA <sub>S</sub> G	TCC A <sub>S</sub> GG	GCC CGG	CCT GGA <sub>S</sub>	CCC	C3'	(SEQ ID 25)
5)	5'CCC 3'GGG	NCN NGN	NNC NNG	A <sub>S</sub> CA <sub>S</sub> TGT	CA <sub>S</sub> C GTG	CGC GCG	CCC	C3'	(SEQ ID 24)
4)	5'GGG 3'CCC	CCG GGC	GGA <sub>S</sub> CCT	GA <sub>S</sub> G CTC	A <sub>S</sub> A <sub>S</sub> C TTG	A <sub>S</sub> TA <sub>S</sub> TA <sub>S</sub> T	GCG CGC	A <sub>S</sub> C3' TG5'	(SEQ ID 23)
3)	5'CCC 3'GGG	GCC CGG	CA <sub>S</sub> C CTG	A <sub>S</sub> CA <sub>S</sub> TGT	CA <sub>S</sub> C GTG	CGC GCG	CCC	C3' G5'	(SEQ ID 22)
2)	5'GGG 3'CCC	CTG GA <sub>S</sub> C	GTG CA <sub>S</sub> C	TGG A <sub>S</sub> CC	TA <sub>S</sub> G A <sub>S</sub> TC	A <sub>S</sub> CT TGA <sub>S</sub>	CCC	C3' G5'	(SEQ ID 21)
1)	5'GGG 3'CCC	GCG CTC	GGG CCC	GGA <sub>S</sub> CCT	TA <sub>S</sub> T A <sub>S</sub> TA <sub>S</sub>	GGA <sub>S</sub> CCT	CAC GTG	C3'	(SEQ ID 20)

GGGCG T  $A_STA_ST$  G\* TGTG GCGGG GG (SEQ ID 28)  $FIG. \ \ \, 7B$ 









NATURAL DNA: Y=0, X=0

THIOPHOSPHATE: Y=0, X=S

DITHIOPHOSPHATE: Y=S, X=S

 $Y = \begin{bmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 1 \end{bmatrix}$ 

 $B\!\!=\!\!T\!HY\!M\!IN\!E$  , ADENINE, CYTOSINE OR GUANINE

FIG. 10A

 $S = \begin{bmatrix} 0 & \text{Thy} \\ 0 & \text{O} & \text{Thy} \\ 0 & \text{O} & \text{Thy} \\ 0 & \text{O} & \text{O} & \text{O} \\ 0 & \text{O} & \text{O} \\ 0 & \text{O} & \text{O} \\ 0 & \text{O} & \text{O} \\ 0 & \text{O} & \text{O} \\ 0 & \text{$ 

THYMIDINE 3'-O-PHOSPHORODITHIOATE

FIG. 10B

